

IN THE CLAIMS

Each claim of the application is set forth below with a parenthetical notation immediately following the claim number indicating the claim status. The Examiner's entry of the claim amendments under Section 1.121 is respectfully requested.

1. (CURRENTLY AMENDED) An integrated circuit structure for controlling selecting a scheduling scheme according to which data processing is processed by a shared network resource, wherein the data is supplied from a plurality of network users, each network user having a data processing priority, said integrated circuit structure comprising:

a first circuit module capable of implementing a plurality of scheduling schemes including a first scheme and a second scheme; and

a second circuit module selector for selecting an enabled scheduling scheme from among at least one of the plurality of scheduling schemes, wherein the network resource processes data according to the enabled one or more selected scheduling schemes, wherein responsive to the first scheme enabled the shared network resource services all network users by successively processing a limited amount of data from each network user, wherein the data processing priority determines the order in which the shared network resource processes data, and wherein responsive to the second scheme enabled all data from a higher priority network user is processed before processing data from lower priority network users.

2. (CURRENTLY AMENDED) The integrated circuit structure of claim 1 wherein each one of the plurality of network users is assigned to a service class, and wherein the second circuit module controls selector causes the network resource to service data from each service class in accordance with the enabled one or more selected scheduling schemes.

3. (CURRENTLY AMENDED) The integrated circuit structure of claim 2 wherein each user within a service class is assigned a priority within the service class, and wherein the second circuit module controls selector causes the network resource to service data from each user in accordance with the priority of the user within the service class.

4. (CURRENTLY AMENDED) The integrated circuit structure of claim 1 wherein the network resource further comprises at least one data queue for each one of the

plurality of network users for storing data received from the user, and wherein the network resource services data from each user by reading data from the at least one data queue of the user in accordance with the enabled one or more selected scheduling schemes.

5. (ORIGINAL) The integrated circuit structure of claim 4 further comprising two data queues for each user, wherein a first data queue is a pending queue where incoming data packets are stored, and wherein a second data queue is an active queue from which data is serviced by the network resource.

6. (ORIGINAL) The integrated circuit structure of claim 1 wherein the data is in the form of data packets.

7. (CURRENTLY AMENDED) The integrated circuit structure of claim 1 wherein the second circuit module selector is manually operable for selecting the enabled one or more of the scheduling schemes.

8. (CURRENTLY AMENDED) The integrated circuit structure of claim 1 wherein the second circuit module selector is operable for selecting the enabled one or more of the plurality of scheduling schemes in accordance with a type of data presented by a plurality of service classes.

9. (CURRENTLY AMENDED) An apparatus for selecting data from a plurality of network users for service by a shared network resource, wherein the data from each one of the plurality of network users is assigned to a priority class, and wherein a scheduling scheme for selecting the data for servicing by the network resource is selectable from among a plurality of scheduling schemes, said apparatus comprising:

a controller for supplying a signal indicating a first or a second enabled one or more selected scheduling schemes from among the plurality of scheduling schemes;

a plurality of scheduling blocks each processing data from a respective priority class and each providing an eligible queue output signal in response to data from the respective priority class awaiting service; and

a class selector for determining the data to be serviced in response to the eligible queue output signal from each one of said plurality of scheduling blocks and further in response to the first or the second enabled one or more selected scheduling schemes, wherein responsive to the first scheme enabled the shared network resource services all network users

by successively processing a limited amount of data from each network user, wherein the data processing priority determines the order in which the shared network resource processes data, and wherein responsive to the second scheme enabled all data from a higher priority network user is processed before processing data from lower priority network users.

10. (ORIGINAL) The apparatus of claim 9 wherein the apparatus is incorporated in an integrated circuit.

11. (CURRENTLY AMENDED) The apparatus of claim 9 wherein the data from the plurality of network users of each class is provided on one of a first and a second queue, and wherein the enabled ~~selected~~ scheduling scheme determines whether said first queue or both said first and said second queues are processed by each one of the plurality of scheduling blocks.

12. (ORIGINAL) The apparatus of claim 11 wherein the first queue is an active queue and wherein the second queue is a pending queue, and wherein data is stored in the pending queue while the network resource services the data in the active queue.

13. (ORIGINAL) The apparatus of claim 9 wherein each one of the plurality of scheduling blocks implements a smooth deficit weighted round robin scheduling scheme.

14. (ORIGINAL) The apparatus of claim 9 wherein the plurality of scheduling schemes comprise strict priority, bandwidth limited strict priority and strict priority plus smooth deficit weighted round robin.

15. (CURRENTLY AMENDED) For a shared network resource receiving data from a plurality of subscriber classes each class comprising a plurality of subscribers, a method for implementing a user-selectable scheduling scheme, from among a plurality of available scheduling schemes, for controlling processing of data received from the plurality of ~~subscribers subscriber classes~~ by the network resource, comprising:

determining the user-selected scheduling scheme;

if a first scheduling scheme is selected, processing data received from subscribers of the plurality of subscriber classes according to a predetermined priority order for each subscriber class, wherein all data from the plurality of subscribers of a higher priority subscriber class is processed before processing data from subscribers of a lower priority subscriber class of the plurality of subscriber classes; and

if a second scheduling scheme is selected, first processing data received from subscribers of the plurality of subscriber classes within at least the highest priority subscriber class, then processing data received from subscribers within the remaining subscriber classes according to a round robin scheduling scheme.

16. (CANCEL)